

obtained. The direction will be from the antenna and toward the loudspeaker and the user's head. Since radiation in this direction gives no or only a weak connection to a receiving antenna due to the user being
5 between the antennas, the efficiency of the antennas will be increased with a screen.

When, as stated in claim 12, said screen is the ground plane of the antenna, it is possible to use the
10 characteristics of a directive antenna such as a directive patch antenna in an advantageous manner.

When, as stated in claim 13, ^{The} ~~the~~ loudspeaker is coupled with the acoustic resonance chamber by means of at least
15 one acoustic channel passing through said screen, it is possible to dimension the properties, e.g. length, height, diameter or shape, of an acoustic coupling between the loudspeaker and the acoustic resonance chamber in an advantageous manner. This is due to the
20 fact that the acoustic characteristics of the acoustic channel are defined by arbitrary choices instead of the surrounding components of the acoustic coupling providing the designer of the communication device with an active tool when defining the acoustic characteristics of the
25 device.

When, as stated in claim 14, the channel consists of one or more holes in said screen, it is possible to direct the acoustic coupling to the acoustic resonance chamber
30 over the generally shortest possible distance.

When, as stated in claim 15, the number of holes is between 1 and 50, preferably 4 holes, it is possible to

Moreover, the fact that the shape of the resonance chamber of a loudspeaker is of very little importance with respect to the desired acoustic performance has more or less been fully exploited.

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~~When, as stated in claim 19,~~ ^{The} ~~the~~ acoustic coupling means consists of at least one acoustic channel, it is possible to define the acoustic values of acoustic coupling more precisely. This is, of course, also subject to certain limitations associated with the use of acoustic channels e.g. length, diameter and shape of the channel. These limitations are well described within the art of acoustics and more specifically in the design of acoustic channels.

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Brief description of the drawings

The above and other objects, features and advantages of the present invention will become more apparent from the detailed description and the accompanying drawings in which:

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Fig. 1 is a cross section of a conventional communication device with two separate resonance chambers.

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Fig. 2 is a perspective view of a communication device according to the invention.

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Fig. 3 is a view of a preferred embodiment of the connection between the loudspeaker and the resonance chamber.